

Economic consequences of state failure; Legal capacity, regulatory activity, and market integration in Poland, 1505-1772

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ABSTRACT

With use of innovative proxies and new annual data, I demonstrate that relatively high legal capacity and regulatory activity of the early-modern Polish parliament in the 16th century was positively associated with deeper commodity market integration. Conversely, subsequent lack of effective law-making empowered centrifugal regional forces that fostered market fragmentation. This indicates that early parliamentary regimes might have required legal capacity to harmonise domestic institutions and reduce the transaction costs. The Polish case suggests a hypothesis that the pre-1800 ‘Little Divergence’ between European parliamentary regimes could be potentially partially explained by differences in their capacities.

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INTRODUCTION

What factors allowed certain regions of Europe to develop their market economies early and what were the reasons for the relative stagnation of the less successful areas? Specifically, what was the role of the early-modern transition from feudalism to semi-centralised and relatively powerful territorial states in setting the stage for modern economic growth? Political institutions are critical determinants of prosperity (e.g. Acemoglu & Robinson 2012). Many scholars identify the parliamentary form of governance and the rule-of-law as preconditions for the market economy (e.g. North & Weingast 1989). The ‘Little Divergence’ in pre-1800 economic development between England, the Netherlands, and the rest of Europe is often linked to the formation of territorial parliamentary regimes in the two successful countries (e.g. Van Zanden et al. 2012; Broadberry and Wallis 2017). However, the fact that not all preindustrial parliamentary regimes succeeded economically demonstrates that the limitation of the authority of the king and the consolidation of power around a parliament is an insufficient condition for sustained economic growth. According to Besley and Persson (2011), a state can promote prosperity only if it possesses (1) legal capacity denoting the authority and infrastructure to create and enforce the law and (2) fiscal capacity representing the means to finance its operations. This study contributes to the growing literature on the role of state capacity in promoting economic growth before 1800 (Bonney 1995; O’Brien 2011; Dincecco & Katz 2016; Johnson & Koyama 2017). It complements the earlier studies that predominantly focused on fiscal capacity with an original study of the impact of legal capacity. With use of innovative proxies and new annual data, I analyse the role that the parliamentary regime played in developing a domestic commodity market in the First Republic of Poland. The results indicate that legal capacity and regulatory action were both positively associated with deeper integration of the domestic commodity market. Conversely, governmental inaction was associated with a rise in the transaction costs.

Early-modern Poland is uniquely suited to study the economic impact of parliamentary regime. In the 16th century, Poland both limited the authority of the king and experienced, relatively speaking, a golden age of political centralization under a strong parliament, the Sejm. At the time, the Polish(-Lithuanian) Commonwealth became the biggest state in Europe covering the territories of present-day Poland, Lithuania, Ukraine, Latvia, Estonia, and Belarus. Simultaneously, the Sejm issued numerous

regulations that began to change and unify the dissimilar, historical, regional, economic institutions across this vast country. This was followed by a growing opposition to the state's power, propelled by the ideology of 'Golden Freedom' from the king and the government. The mounting opposition towards a strong centralized state led to introduction of the right of a single delegate to discontinue the Sejm's proceedings and nullify its decisions, *liberum veto*. By bribing the delegates to the parliament, Prussia, Austria, and Russia made frequent use of the veto to abort the Sejm's sessions. This led to a lack of effective law-making at the central level of the state. I use the historical record to understand how the gradual weakening of the Polish state affected the market economy between the formation of the country's parliamentary system in 1505 to the first partition of the country by its neighbours in 1772.

In more detail, contrary to most European central governments that enjoyed stable or increasing incomes, the Polish state had a right to collect only minuscule permanent taxes (Karaman & Pamuk 2010; Filipczak-Kocur 1995). The Polish king, due to his limited authority, could not raise any funds nor create laws without the approval of the Senate and the House of Delegates that, together with the ruler, formed the Sejm. Contrary to most other European countries that retained a relatively strong and independent monarch, Polish parliamentary activity captures (a) all law and tax creation on the central level of the state, (b) protection of the rules and property from predation, and (c) enforcement of the law by the parliamentary court and commissions. When the Sejm was inactive, the Polish state had no ability to take legal action and influence the markets. The decision-making power was fragmented and left to the traditional regional assemblies, Sejmiks, which after 1717, were themselves constrained and dominated by powerful local magnates. This period of low legal capacity of both central and regional governments is known in Polish historiography as the 'Era of Anarchy' and can be interpreted as state failure of Poland. Moreover, because the vetoes that aborted the parliamentary sessions were mostly sponsored by foreign powers and inspired by international politics, the changes in state capacity were largely exogenous to domestic market conditions. This 'historical experiment' offers a rare opportunity to test if legal capacity and regulatory activity of central institutions of governance stimulated pre-1800 market development. Only researching successful historical England and the Dutch Republic is insufficient to falsify the hypothesis that strong parliamentary regimes promoted markets.

THEORETICAL FRAMEWORK

Here I outline the most relevant economic-historical literature concerning the links between economic growth, domestic market integration, feudalism, state formation, institutional harmonization, parliamentarism, and legal capacity of the state. I combine parts of this literature into a heuristic model and derive a testable hypothesis to reinforce the core relationships of the model empirically.

Markets are widely regarded as crucial factors influencing prosperity. The *First Welfare Theorem* states that the unlimited ability to exchange brings about optimal allocation of resources. The lower the transaction costs are, the more inter-connected and efficient the economy, and the richer its inhabitants. An increase in trade and economic specialization forms the bases of the ‘Smithian’ economic growth (Kelly 1997). According to Jeff Davidson and Alfons Weersink (1998), any prospective exchange needs personal property rights, means of transferring the ownership, and a guaranteed enforcement of contracts. Transaction costs are also influenced by various barriers to trade like taxation, transportation costs, imperfect information, and institutional differences, such as differences in regulations, measurements, and monies (see Epstein 2000). The process of extending the geographical size of a market by lowering the transaction costs is known as market integration. According to the orthodox view that focused on the transportation costs, market integration was driven mostly by technological and infrastructural advancements, such as the railway, that brought costs reduction in the 19th century (e.g. O’Rourke 1997). More recently, various studies set to measure the extent of market integration in preindustrial Europe (Shiue and Keller 2007; Bateman 2011; Frederico 2012, Chilosì et al. 2013; Malinowski 2016a). This new research confirms that, after a period of medieval disintegration, markets only became effectively integrated in the 19th century. However, this new literature also identified that there were numerous incidents of greater integration that, due to the lack of significant changes in the modes of land transportation in the early-modern era, cannot be simply explained by technological advancements. This suggests institutions played a crucial role in the process of preindustrial market integration (Uebele 2013).

According to Joseph Strayer (1970) and Nicholas Henshall (1992), the modern concept of a state is not applicable to medieval and feudal Europe characterised by fragmented political authority, overlapping and competing legal jurisdictions, and private armies. Medieval Europe was a mosaic of

semi-independent historical regions ruled by feudal landlords and powerful cities that were bonded by a titular ruler into broader territorial political entities. The authority within these structures was dispersed. According to Otto Hintze (1975, p. 192), feudal regional lords lacked the attributes of sovereignty defined as independence and exclusive rights within borders. Under the system of vassalage, the legitimisation of their position came from the titular territorial rulers. However, the capacity of these ‘poor kings’ to rule the whole state was limited because many legal and fiscal prerogatives rested with the local lords (see: Johnson and Koyama 2017; ‘t Hart et al. 2018). The central governments also lacked developed bureaucracies capable of effectively controlling their vassals (Anderson 1974; Henshall 1992). The weakness of the titular rulers and their inability to constrain the regional elites prevented contract enforcement, when trading between lands, and allowed the local lords to create new rents (Epstein 2000). Moreover, there were ancient institutional differences between these semi-independent feudal political entities resulting from, for example, different locations, resource endowments, and idiosyncratic histories. Vested interests incentivized the feudal lords to preserve these dissimilarities. Differences in laws, currencies, and measurements allowed them to collect various rents and make other speculative gains. Stephan Epstein (2000) famously argued that this parcellation of power, regional rent-seeking, and institutional differences caused high transaction costs between the lands and that this form of double marginalisation contributed to the economic underperformance of the late Middle Ages.

In the Early Modern era, most territorial states in Europe began to replace the feudal political fragmentation with centralization of authority defined here as the power to give orders, make decisions, and enforce obedience by the central government. The governments consolidated the power that used to be held by regional lords and assemblies. This led to an increase in taxation and top-down regulation. The central authority had not yet been divided between executive, legislative, and judiciary branches. Instead, the power was shared between kings and parliaments and its balance determined whether regimes were more absolutist or parliamentary. This laid the foundations for the modern nation states. The rise of state capacity of the early modern states has been demonstrated by Kamil Kıvanç Kareman and Şevket Pamuk (2010) and recently discussed in detail by Johnson and Koyama (2017).

Did this progressing centralisation and increase in state capacity result in the formation of a more integrated domestic markets? According to Epstein (2000), economic growth in preindustrial

Europe was primarily Smithian and dependent on low transaction costs. Based on Douglass North (1981), Epstein argued that the transaction costs are a function of the clarity of the 'rules-of-the-game'. Convergence in institutions under both parliamentary and absolutist regimes makes the terms and conditions of an exchange clearer and lowers the transaction costs. Uniform monetary, legal, and measurement systems ease the interaction between the trade partners. According to Epstein, the centralisation of sovereignty can help enforce convergence of institutions. Political centralisation deprives local elites of jurisdictional power and displaces rent-seeking from the local to the 'national' arena. This makes rent-seeking more transparent and therefore harder to implement. Transparency and third-party enforcement also mitigate the prisoner's dilemma problem. Furthermore, political centralisation reduces the costs of coordination, allowing for concerted decisions and policies. This should result in a convergence of market institutions. According to Stephen Broadberry and Joseph Wallis (2017), creation of uniform impersonal rules by the state was essential for market development. Conversely, weak central authority transfers the power to the local elites who benefit from institutional differences and personalised privileges. Similarly, Johnson and Koyama (2017) argued that centralised and strong governments of early modern France and Prussia managed to suppress the attempts by local elites to extract rents by which they decreased exchange costs on the domestic market. The negative effects of tax predation and political fragmentation in preindustrial German and Italian lands were identified by Mark Dincecco (2010). On the other hand, it has been argued that political and institutional fragmentation provided economic actors with exit options and therefore forced competition between different institutional technologies that fostered their development (compare Tilly 1990; Cox 2017).

Epstein (2000) argued that both absolutist and parliamentary regimes could achieve centralisation of institutions and harmonization of laws. The literature advocates that parliamentary regimes that constrained the executive but still provided order are superior to those that left the king unconstrained; According to Douglass North and Barry Weingast (1989), the Glorious Revolution in England (1688) limited the extractive potential of the rulers and fostered protection of property rights that inspired investment and innovation (see also Van Zanden et al. 2012). The authors see impersonal market institutions a necessary condition for economic development (North & Weingast 1989, p. 831). Daron Acemoglu and James Robinson (2012) argued that parliamentary regimes are generally better at

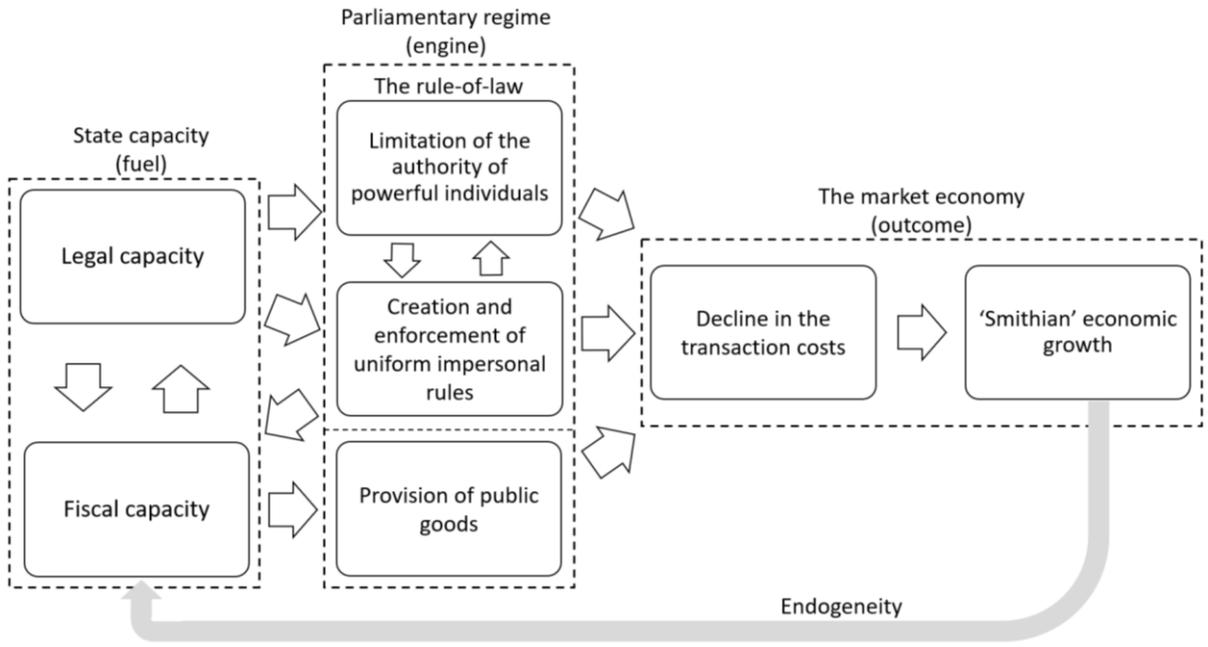
forming inclusive economic institutions. Similarly, Broadberry and Wallis (2017) argued that parliamentary regimes were much more likely to create impersonal rules and promote prosperity than the feudal or absolutist ones that tended to produce more personalised privileges. Furthermore, David Stasavage (2011) demonstrated that parliamentary control led to an increase in fiscal state capacity that allowed for better provision of public goods. Dan Bogart (2011) demonstrated that parliamentary supervision encouraged investment in infrastructure that arguably stimulated development of integrated domestic markets.

The idea that the centralisation of power around a parliament should lead to economic development has received considerable criticism from many angles (e.g. Barro 1997). Most notably, North and collaborators (2009) argue that in the ‘limited-access orders’ or ‘natural states’, the elite can use the diet to further their own corporate agenda, create rents, and perpetuate an extractive political order. Moreover, Besley and Persson (2011) argue that governments can influence the economy only if they have the legal and fiscal capacity to act. Differences in the degree of state capacity and interest of the elites may therefore partially explain why certain parliamentary regimes managed to integrate their domestic market and promote growth while others did not (see Johnson & Koyama 2017).

Figure 1 combines the main points of the literature into an explicit heuristic model that focuses on territorial parliamentary regimes. The model makes no claims about absolutist or mixed regimes. The model outlines the core causal connections between state capacity, the benefits of a parliamentary system, and economic outcomes. It associates high capacity of the parliament with centralisation. Considering the institutional literature and to flesh out the core idea, I propose that parliaments may be regarded as ‘engines’ of economic growth, which require state capacity (‘fuel’) to function. Active parliaments affected the economy via three main channels. Firstly, parliamentary control increased the accountability of the king and the elites, obstructed the creation of personal privileges, and stopped predatory extraction by the powerful individuals like kings and magnates. Secondly, centralization of power by the parliament led to the implementation of uniform, impersonal ‘rules-of-the-game’ across the country. This overcame the over-taxation brought about by the feudal fragmentation of authority that split rule across trade routes thereby inducing regional institutional differences and rent-seeking of the local elites. The mutually reinforcing (a) accountability of the elites and (b) existence of uniform

impersonal rules form the bases for (c) the rule-of-law. Finally, parliamentary supervision over the national budget led to using the state’s resources to finance utilitarian public goods, such as safety, rather than the frivolous consumption by the elites. This was crucial in early-modern Europe where frequent warfare demanded defence spending. These three factors supported competition, free-movement of goods, protection of property rights, and prohibitions on the use of violence to obtain goods or to coerce others, thus lowering the transaction costs and forming the bases for ‘Smithian’ economic growth. This process is endogenous because economic growth increases the tax base. The proposed model predicts that low capacity of the parliament/central parliamentary regime would resolve in a shift of power to the local level dominated by unconstrained powerful individuals who would use their authority to create personalised and/or region-specific rents. Without governmental coordination, regional political assemblies would make decisions independently and thus increase the transaction costs.

Figure 1: Core relationships between state capacity, actions of a centralised parliamentary regime, and Smithian economic growth based on state-of-the-art theoretical and historical literature.



Poland limited its king and formed a parliamentary regime and already in 1505. It retained this parliamentary form of governance until the partitions in the late 18th century. Moreover, between the 16th and 18th century, Poland experienced both a rise and decline in legal capacity. Considering the theoretical model, I propose a testable hypothesis that the changes in legal capacity affected the regulatory activity, i.e., creation of rules, and thus transaction costs on the domestic commodity market.

THE CASE OF OLD POLAND

In 1025, Bolesław I the Brave was crowned as the first King of Poland. Afterwards, in the process of territorial expansion and consolidation, a collection of historical lands became an integral part of a geopolitical club known as the Crown of the Kingdom of Poland. The process was interrupted in 1138 when, as many medieval European countries, Poland entered a period of feudal territorial fragmentation. At the time, Bolesław III Wrymouth established rules for shared governance of these Polish lands by his four heirs. Soon after his death, the system failed, and his sons began to fight each other for control over the lands and the title of the ruler of Poland. The lands of the Crown were allocated to separate districts ruled by different lords/dukes who, in theory but rarely in practice, answered to the oldest member of the ruling family residing in the main district. The disarray lasted for nearly 200 years and ended with reunification of the Kingdom by Władysław I the Elbow-high and his son Kazimierz III the Great in the 14th century (Bardach 1957).

After the reunification, the prerogatives of the king were gradually limited by a range of privileges given to the nobility, *Szlachta*, the political ancestors of medieval knights who accounted for around ten per cent of the population (Jędruch 1998, p.24). In 1355 and 1374, kings Kazimierz and Louis the Hungarian promised not to levy any extraordinary taxes without the nobility's consent. This resulted with creation of only marginal permanent taxes. It also inspired development of regional representative bodies, Dietines, known as Seymiks, originally assembling to give the required consent to taxation. These evolved into institutions of direct democracy, albeit with no universal franchise, where all male adult nobles who were willing to participate met to make decisions regarding their lands by majority voting. After 1454, when issuing any new laws, not only imposing taxes, kings had to consult the Dietines (Bardach 1957). For comparison, Seymiks resembled the Swiss Landsgemeinde, while the *Szlachta*, due to its military heritage, is comparable with the Japanese Samurai (Jędruch 1998, p.36).

The increasingly federal character of the state and the privileges given to the nobility led to the formation of the Polish parliament known as the Sejm. From 1468 onwards, the Dietines elected delegates to this Great Diet. The oldest historical record of the Sejm composed of the hereditary King, the appointive Senate, and elective House of Delegates dates back to 1493. After 1505, no law binding the whole country could be passed without the explicit unanimous approval of the three parts of the

Seym. It marked the formation of the system of Estate Monarchy, not dissimilar to the one built around the Parliament in England, the Estates General in France, the Cortes in Spain, the Snêm in Bohemia, and the Riksdag in Sweden with the difference that in the other European countries the rulers retained some legal autonomy and could issue, for example, edicts without the need of the assemblies to legalise all their initiatives. In Poland, the king could only propose and veto legislation. Because he could not rule by decree, the ruler needed a well-functioning Diet, of which he was an integral part, to exercise influence.

The king summoned the Seym by sending the writs of summons to the Seymiks where he proposed the new legislation. Dietines were giving their delegates clear instructions regarding the land's position on the proposed subjects and requested additional issues that should be discussed. Initially, the operations of the Diet were based on custom. Building on fragmentary evidence, historians hypothesise that in the 16th century parliamentary decisions were made by majority voting after mediation by the king between the opposing parties (for discussion see Jędruch 1998, p.29). The bills agreed on by the House of Delegates and Senate became legal acts only after the King gave the royal ascent to all of them jointly at the end of Seym's session. Laws agreed on centrally were valid on the local level. However, the principal of regional self-governance allowed the Seymiks to issue their own by-laws next to the central laws. If a session of the Seym ended prematurely, it failed to produce any legally binding acts. In such cases the Seymiks had to issue their own consent to the issues independently.

The House of Delegates balanced the power of the king and his council. The supervision of the king limited permanent taxes, and the need for parliamentary consent prevented a rise of absolutism that developed in many other European countries. However, by grouping the delegates of all the Dietines, Seym allowed the central government to have a direct link to the local level, which gave it the means to raise tax, create laws and enforce them across the country (compare Dincecco 2009). The network of Seymiks supported the underdeveloped royal bureaucracy resting on the royal regional representatives known as *Starostas* who declined in importance in the 16th century (compare, Henshall 1991 p.28 on how the royal representatives underpinned the administration in more absolutist France).

The Polish political system was dominated by three main coalitions of power, (1) the king, (2) the nobility, and (3) the magnates, i.e., the richest of the landed nobles. Most of the population had no

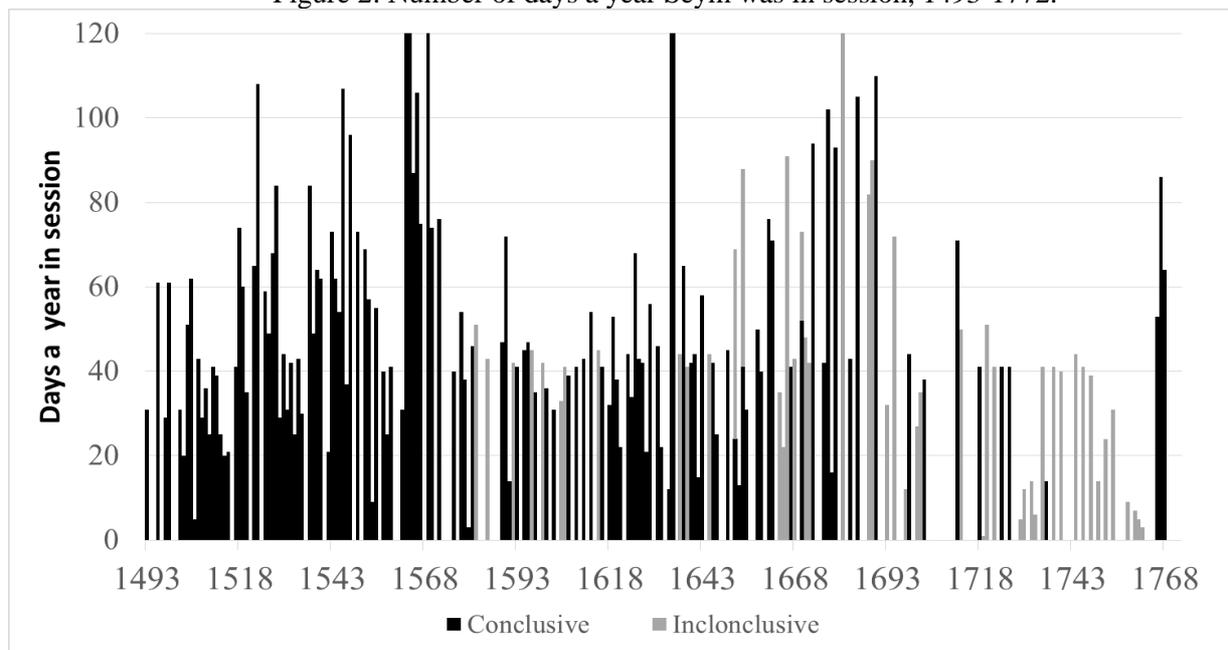
political access. In the framework of North and collaborators (2009), Poland was a 'natural state', where the institutions were constructed to create rents for the elite. The king and the rank-and-file nobles counterbalanced the magnates. The nobles were interested in harmonising the institutions across the country to the benefit of their social class; Export of grains via the Baltic was the main source of income of the nobility, which promoted policies aimed at lowering the transaction costs on the commodity market (Rybarski 2015). At the same time, the nobility created rents that extract resources from the other social classes (serfdom). Conversely, the magnates who, via the system of clientelism, hold significant authority on the local level, had vested interest in obtaining personal, rather than corporate, privileges and opposing state's influence on the regional level. In very broad terms, the king and the nobility supported political centralisation while the magnates benefited from feudal-like fragmentation of authority (Mączak 1982).

This political conflict was initially won by the king and the middle nobility. The parliamentary political system advanced in the 1560s and 1570s. In 1569 Poland and Lithuania that had been in a personal union since 1385 decided to merge the Seyms of the Kingdom of Poland and the Grand Duchy of Lithuania into the Seym of the Polish-Lithuanian Commonwealth. Soon after the merge, in 1572 King Zygmunt the Second died without an heir. This led to a succession crisis. In 1573, it was decided that each new king of Poland (who was also a grand duke of Lithuania) would be elected in a universal election by all the Szlachta. Any domestic or foreign nobleman could be elected. This effectively abolished hereditary successions in Poland and turned the Estate Monarchy into a Republic with the elective kings serving as a life-long chief magistrate. Upon the elections, every new king had to agree on a set of basic principles known as the Cardinal Laws or Golden Liberties that were effectively, *avant la lettre*, the constitution of the Republic. They stipulated that the king would: (1) respect all the previously given privileges of the nobility, (2) summon the Seym regularly, (3) be constantly audited by the representatives of the Senate, (4) be abolished should he fail to observe the laws of the Republic and threaten the freedom of the nobility. Royal prerogatives were limited to the legal initiative and veto. This constitutional change set the country on a different path to most of other European states that either developed absolutist structures at the costs of the parliaments (France, Spain, Sweden before the 18th

century) or empowered their central representative institutions but also kept the relative continuity of the main ruling families (the Netherlands and England).

Van Zanden et al. (2012) proposed to proxy the involvement of an early modern parliament by counting how many days it was in session each year.¹ In the context of most of the Western European countries that retained the power of the rulers to perform some forms of legal actions independently, parliamentary activity captures the bargaining between the ruler and his subjects. However, in the Polish context where the King, Senate, and House of Delegates were complementaries, parliamentary activity represents the state's capacity to take legal action. Figure 2 shows new data on the number of days between the opening and closing of the Sejm's sessions each year. It distinguishes between the conclusive sessions that produced acts and the ones that were aborted before the royal ascent.

Figure 2: Number of days a year Sejm was in session, 1493-1772.



Based on: Konopczyński (1948). The author reported the date of the opening and closing of each individual parliamentary session. Sessions related to royal election procedure are not included. See the online appendix.

Figure 2 demonstrates that the 16th century was the golden age of Polish parliamentarism. At the time of the formation of the republican system, Sejm's operations were frequent and conclusive. Conversely,

¹ Van Zanden et al. (2012) also constructed indexes of activity based on how often a parliament met each century. They set the Polish index at zero because, they argue after Marongiu 1968, p.88, the Sejm did not meet their definition of a parliament that was only valid if it represented the cities. As, in fact, the cities were represented in the Sejm, for discussion see Jędruch 1998, p.90, the values for Poland should be revised. A revised index would be 71/82, 49/80 and 15/62 meetings (only concluding/all) in the 16th, 17th and 18th centuries respectively.

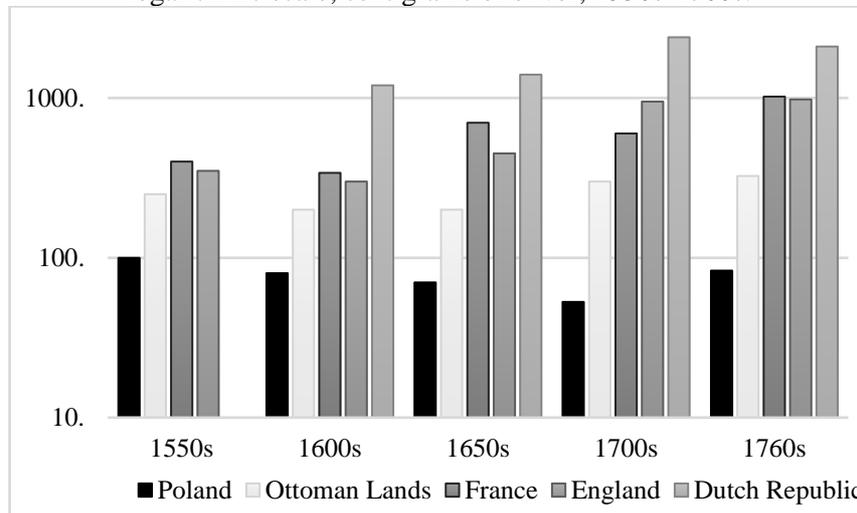
after the second half of the 17th century most of the sessions become inconclusive. This shift was a result of introduction of what effectively was a rule of unanimity of the decisions of the House of Delegates.

This legal change into the operation of the parliament was a result of a major constitutional crisis. The fact that the King of Poland, a major international player in the period, was elective, created uncertainty on the European political arena dominated by powerful hereditary houses. The exceptional republican order disallowed the use of dynastic policy, the main tool of forging lasting alliances in the region dominated by strong monarchies. This led to frequent foreign military interventions backing or opposing international candidates for the Polish throne (Jędruch 1998). The situation aggravated in the aftermath of the 30 Years War, when the new European order was forged in the Treaty of Westphalia in 1648. Around the same time, Poland was struggling with a Kozak uprising, a war with Russia, a Swedish invasion, and Turkish incursions. To ensure more political stability, the progressive party associated with the king, and dominated by the mid-income nobility, proposed that the new kings would be elected before the death of the incumbent. This inspired opposition of the conservatives, primarily the magnates and their clients, who saw the proposal as a threat to the Golden Liberties. To block the possibility of a constitutional change, they insisted on the right of a single deputy to discontinue the parliamentary proceedings and effectively nullify its decisions, *liberum veto*. The first use of this practice took place in 1652 and inspired major political and constitutional conflict between the conservative republicans and progressive royalists that escalated into a civil war in 1663. The conflict ended with the victory of the conservative faction, abdication of the king, and introduction of the liberum veto into the Cardinal Laws in 1669. Contrary to the intentions, the liberum veto was used mostly by the foreign states that bribed the delegates to the Sejm to weaken the Polish state. For example, in the period 1697 to 1763, 28 sessions were terminated. Prussia and France were credited with having caused seven disruptions each, while Russia sponsored 11 vetoes (Jędruch 1998, p.156). Termination of session was, therefore, largely unrelated to domestic market conditions but was driven by international politics.

The inability of the parliament to conclude many of its sessions led to petrification of the government. The king could not, as it was to a varying degree in the case in the absolutist countries, serve justice, rule by decree, nor collect new unauthorised taxes. This resulted in the decline in both legal and fiscal state capacity. Figure 3 denotes revenue of the central government in a range of countries

and depicts that after the 16th century Poland not only began to lag behind other European states that were becoming increasingly centralised, but also collected less funds in absolute terms.

Figure 3: Fiscal capacity of the Polish state in a European perspective, central state revenue per capita, logarithmic scale, centigrams of silver, 1550s-1760s.



Source: Values for Poland in 1600, 1650, 1700, and 1760s see the online appendix. Values for Poland in 1550 and as well as other countries were taken from Karaman and Pamuk (2010).

These political changes were a part of the raise of the ideology/political programme of anarchy in the country. The conservative party advocated that ‘*Poland relies on the lack of governance*’ (*‘Polska nierządem stoi’*). The dominant ideology fetishised the Golden Freedom and demanded further limitations on the operations of the central governmental institutions. The movement was a reaction to the rise of absolutist tendencies in many other European countries. In practice, the ideology of anarchy and Golden Freedom meant opposing both the royal and state’s power (see Jędruch 1998). As discussed, the legal power of the king had been already limited to proposing and vetoing legislation.

Initially this meant a shift of power from the central to the regional level that retained its effective means of independent self-governance. The episode from the mid-17th century till the beginning of the 18th century, is known in historiography as the Period of the Rule of the Seymiks. By 1600, there were 74 of these regional assemblies in the country representing 118 lands and counties (Jędruch 1998, p.26; see Figure 4). Since 1573, dietines had already begun electing their own tax collectors and since 1613, raising their own taxes next to the agreed central taxes. After 1681, central taxes paid by the lands for military purposes that constituted the lion share of the state’s budget, were no longer collected by the Sejm but were raised and spent at the regional level. Seymiks served as

regional courts and, in times of no effective central leadership, regulated the economic policy of their lands. Of notable importance were the so-called economic Seymiks that assembled annually to deal with the distribution of national tax assessments, voting and the collection of local taxes, as well as the approval of local expenditures (Jędruch 1998, p.43). Seymiks also begun opposing the royal suggestions and prioritised their regional interests. According to Wojciech Kriegseisen (1991), who studied the diaries of the participants of the Dietines, whereas in the 16th century the deities tended to be positive towards the king and his writs of summons, in the 17th and 18th century the rhetoric was increasingly negative. In 1717, the Sejm limited the power of the Seymiks. The Sejm of 1717, known as the Mute, because Russian military forces present at the session disallowed the delegates to speak and use the veto, limited the fiscal, i.e., own military budget, legal, and judiciary independence and effective self-governance of the Seymiks. Most of the Seymiks were also constrained by a practice similar to the liberum veto. This deepened the state of anarchy and no effective law making promoted by the neighbouring forces (Bardach 1957).

Figure 4: Areas controlled by different regional assemblies, Seymiks, within Polish-Lithuanian Commonwealth in the 17th century and the location of the seven studied cities.



Note: Courtesy of Jakub Brodacki. Poland in grey. 1) Gdańsk; 2) Cracow; 3) Lublin; 4) Lviv; 5) Warszawa; 6) Konigsberg; 7) Wrocław. The analysis below is robust to exclusion of Konigsberg and/or Wrocław.

The success of the centrifugal forces led to a shift of power from the middle-income nobility towards the magnates. This transformation was greatly facilitated by economic inequality among the nobility that rose sharply after the wars of the middle of the 17th century (Mączak 1982). According to Antoni

Mączak (1982), due to the system of clientelism, i.e., trading political loyalty of Szlachta on the Sejmiks for support by the magnates, the Sejmiks were, in practice, often controlled by the richest families. Moreover, the most powerful magnates owned vast territories, *latifundia*, some of them stretching across many lands. The areas controlled by the most powerful magnates were known as ‘duchies’ (*księstwa*) or ‘countries’ (*państwa*). These internationally recognised political entities existed parallel to the state and there was no formal division of the state into smaller autonomous political units (Kowalski 2013). The ideology of anarchy was especially promoted by the magnates who, due to their unmatched wealth and influence, had most to lose by parliamentary control and most to gain from the regional autonomy.

Due to these changes, the 18th century is known in Polish historiography as the period of informal ‘magnate oligarchy’. On the central level, the country was pacified by several families that were chiefly interested in securing their local interests. They used the Sejmiks – which were filled with their clients – to execute and legalise their local power. The ideology of anarchy, i.e., constraining the central institutions of governance, reinforced their local authority (Mączak 1982). This parcellation of power and the decline in the power of the central state is closely related to the rise of labour duties of the peasants, i.e., serfdom, who lacked the legal protection of the state (Malinowski 2016b).

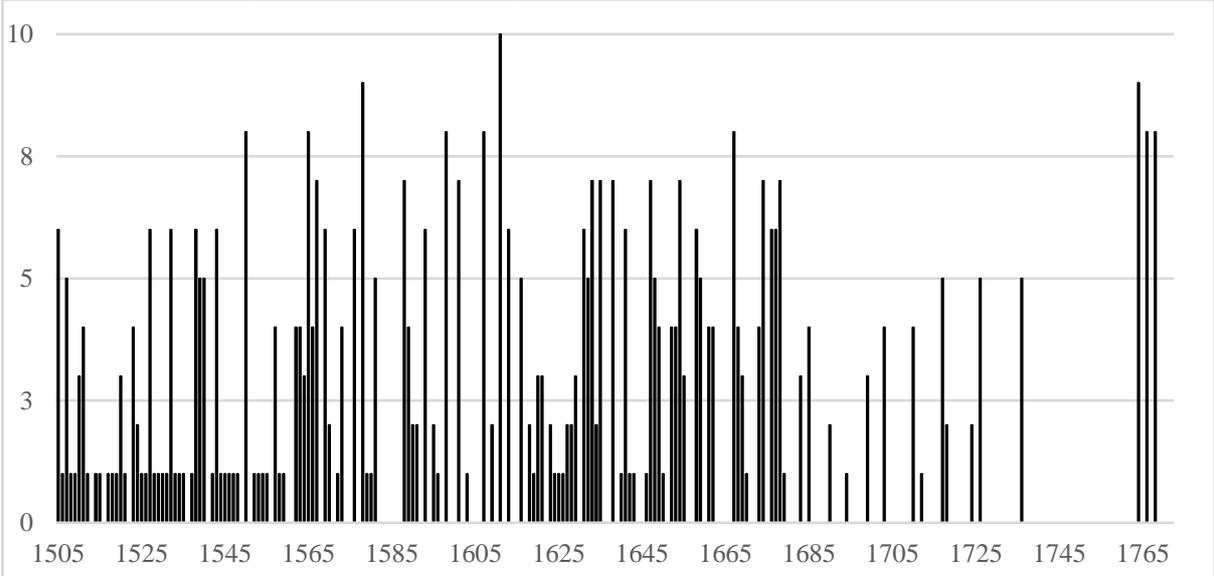
Figure 2 shows a revival in Sejm’s activity in the 1760s. This increase was related to a political programme to repair the country led by the progressive party and the last king Stanislaw August Poniatowski. The attempts to heal the political system alerted the neighbouring powers. Russia, Austria, and Prussia used the Polish centrifugal forces to partition the country and gradually incorporate its parts to their own more centralised states between 1772 and 1795.

HISTORICAL MECHANISMS

How did the Sejm impact the economy? When the Diet was in session it was responsible for serving justice, enforcing existing laws, and constructing new ones. The acts of the Sejm were legally binding everywhere in the country as opposed to the by-laws of the Sejmiks that were recognised locally. The index of parliamentary activity from Figure 2 represents the potential to pass new acts and the degree as to which the state was serving justice and enforcing laws; The Sejm was the highest court in the country

monitoring the state’s officials and other powerful individuals.² Moreover, it elected parliamentary commissions that travelled around the country to enforce the Seym’s regulations, such as the toll sizes. These courts and commissions were only active when the parliament was in session (Rybarski 1939). Therefore, in principal, longer sessions potentially enforced the laws better. Conversely, premature termination of its sessions by the liberum veto upset the operations of the court and the commissions.

Figure 5: Index of the regulatory activity of the Seym, 1505-1772.



Note: See the online appendix.

To demonstrate the impact of the Seym on institutional harmonization, I complement the index of legal capacity (Figure 2), with an original measure of the Seym’s regulatory activity. I investigate the acts of the Seym from 1505 to 1772 published in their compilation (Ohryzko 1859-89). I am interested in the laws that were relevant for the economy. I group the regulations imposed by the Seym into ten areas of economic activity that stand out in the source material, i.e., laws regulating: (1) tolls, (2) transportation, (3) measurements, (4) production, (5) marketplaces, (6) property rights, (7) monetary policy, (8) credit, (9) economic life of the cities, (10) regional courts. I study only the universal and impersonal laws that applied across the country. I do not list the laws that gave personal or regional privileges. The details regarding the creation of the underlying dataset are available in the online appendix. The index of regulatory activity ranges from 0, indicating no regulatory activity, to ten, i.e., Seym’s acts regulating

² Next to the Seym there was also the Tribunal- an appeal court in cases concerning the nobility. It rarely dealt with economic cases, however.

at least one aspect of all the above-mentioned areas of economic life. Figure 5 shows the index of regulatory activity. It depicts the regulatory crisis since the late 17th century and the revival of the Sejm in the 1760s. The index correlates well with the index of parliamentary activity/legal capacity in Figure 2. The Pearson's correlation coefficient of the two indexes is 0.5. This is mostly because the Sejm could not create new laws when it was not in session or when the session was aborted.

The regulations were important for a harmonious operation of the markets. They affected the markets either instantly, i.e., within a year, or gradually. For brevity, I discuss only a sample of mechanisms. For an even more detailed description the historical mechanism see Malinowski (2018).

Regarding the regulations that might have affected the economy in the long-term. Since 1505, tolls were strictly a royal prerogative. It was illegal for landowners to introduce them privately. When the parliament was active, it frequently issued laws stipulating the punishments for the illegal collection of tolls (acts of 1589, 1601, 1607) and regulated the exact procedure of farming the relevant incomes (acts of 1538, 1569, 1589, 1736). Moreover, since 1576, the king was not allowed to levy and regulate tolls without the Sejm's consent. The lack of parliamentary regulation resulted in less control over tax farmers and, over time, encouraged landlords to create illegal tolls.

Moreover, the Diet repeatedly instructed the lands to standardise measures (acts of: 1550, 1565, 1588, 1598, 1601, 1611, 1616, 1631, and 1635). In 1764, on a wave of political reforms, a parliamentary act ordered unification of all the measures in the country. These central regulations were gradually implemented locally. A by-law passed by the Sejmik of the Land of Dobrzyń offers a convenient demonstration:

'Korzec [the tool used to measure the volume of grain] has to be just. [...] Korzec in all towns of the Land of Dobrzyń, i.e., Dobrzyń, Lipń, Bobrowniki, Nieszqów, Skąpe, Rypno, Gorzno, has to be as instructed by the parliamentary act of His Majesty the King, so that there would be the same measurement throughout.' (Kluczycki 1887, p.29)

These regulations had an effect. Stanisław Mielczarski (1962) studied sizes of the korzec in Poland in the 16th century. According to his findings, the country was divided into several trade regions using the same measures of volume. Mielczarski demonstrated that, at the time of high parliamentary activity,

these regions broadened thus making the economy more institutionally integrated. The repetition of the acts instructing the lands to standardise the measurements is indicative of their incomplete implementation. However, repeated acts of the Sejm, at the very least, created an incentive to harmonize institutions that was inexistent when the Diet was inactive.

Table 1: Gradual collapse and a brief recovery of the Polish early modern monetary system.

King	No. of mints during reign	Average silver content in one Grosz during reign	Dates of monetary reforms	No. of different types of legal coins according to the reforms
Zygmunt I (1506-1548)	6	0.99g	1521, 1535	10
Stefan Batory (1576-1586)	8	0.89g	1580	10
Zygmunt III (1587-1632)	17	0.42g	1623	21
Jan Kazimierz (1648-1668)	14	0.34g	1650	14
August III (1733-1763)	Minted in Saxony	0.13g	1749, 1762	16
Stanisław August (1764-1795)	2	0.12g	1766	11

Source: Dylewski 2012; Hoszowski 1928, 1934.

Furthermore, Table 1 presents the development of the Polish monetary system. Minting privileges were given to individual mint-masters who were expected to hold to the Sejm's instructions rather than free-ride on the system by putting less metal into coins than indicated by the official seigniorage. They faced the prisoner dilemma problem, as they did not know if the other mints were also going to uphold the regulations. The silver value of the coins was the highest in the early 16th century. Polish financial historians identified examples of manipulations of the silver content to the benefit of the mint-master in the 17th century. For example, according to Adam Dylewski (2012), the Sejm was too weak to discipline the free-riders and the increase in the number of mints can be interpreted as a sign of handing away rents/personal privileges. The crisis escalated during the personal union with Saxony in the first half of the 18th century, when it was decided that Polish money would be minted abroad, i.e., outside the Sejm's control. The beneficial impact of parliaments on the silver content in Europe was identified by Van Zanden and collaborators (2012) and Ceyhun Elgin, Karaman and Pamuk (2014). The gradual

debasement was also a part of a pan-European trend (Elgin et al. 2014). Moreover, the 16th century was the period which had the least variation in types of monies, which meant that the policymakers kept the system relatively simple and transparent. The increase in the number of different types of monies in the 17th century shows the difficulties with balancing the vested interest of different lands eager to use their historical coins (Dylewski 2012). The issue of the monetary confusion was successfully addressed by the Sejm only during its revival in the 1760s.

Other forms of Sejm's action might have improve the operation of markets more rapidly, within a year. For example, the Sejm was of paramount importance for developing a coherent tax policy as it was originally formed to consent to any new taxation. Poland was a domain state with zero-base budgeting and marginal permanent taxes (Filipczak-Kocur 1995). For this reason, to ensure a stable influx of funds, taxes had to be agreed on repeatedly. Concluding Sejm's issued a general tax, *uniwersał poborowy*, which set general tax rates. In the years when the *uniwersał* was not published, the king had to approach every Sejmik independently to validate the central tax. The records of the royal treasury were burned down during the Second World War, which makes it difficult to demonstrate this process. Different levels of taxation between the lands accepting and refusing the tax might have rapidly increased the transaction costs. Conversely, unification of taxation levels by publishing the *uniwersał* might have had an instant effect on the markets. This suggests that parliamentary activity measures not only legal but also, partially, fiscal capacity of the state and demonstrates that the two were complementary.

Lastly, the parliament was responsible for keeping the official exchange rate between silver and gold in sync with the market prices. The increase in the annual supply of silver was typically greater than the increase in the supply of gold (Palma 2016). For this reason, the exchange rate required frequent adjustments. An update to the exchange rate might have benefited the operation of markets quickly.

METHODOLOGY

I test the hypothesis that legal capacity and regulatory action influenced the development of the integrated domestic market with use of the regression analysis. The complex concept of market development is operationalised by market integration proxied by price convergence. Market integration

relates to a decline in transaction and transportation costs and a gradual transformation of a range of discrete independent regional markets into one economic unit. According to the literature, assuming ongoing efficient arbitrage, low price gaps between cities located in different regions should indicate low transaction costs (for discussion see Federico 2012). Conversely, an increase in the price gap should proxy market fragmentation. I utilise this intuition and investigate if there was a relationship between the size of the price gaps between pairs of Polish cities and the operations of the Seym. I investigate rye, the most traded grain with an unregulated price on the market (Wyczański 1969).

The price gap data are based on annual silver prices of 100 litres of rye in Gdańsk, Warsaw, Cracow, Lublin, Lviv, Königsberg, and Wrocław (21 city-pairs). Gdańsk, Warsaw, Cracow, Lublin, Lviv were in the Kingdom of Poland. Königsberg was in Ducal Prussia, which was a fief of the Polish king (see Figure 4). Wrocław was not reunified with Poland after the Middle Ages, but, according to Wolański (1961), it remained in close economic ties with the country. The price data has been taken from a compilation made by Malinowski (2016a). The information about the construction of the dataset are available in the online appendix. Exclusion of Königsberg and Wrocław does not change the results.

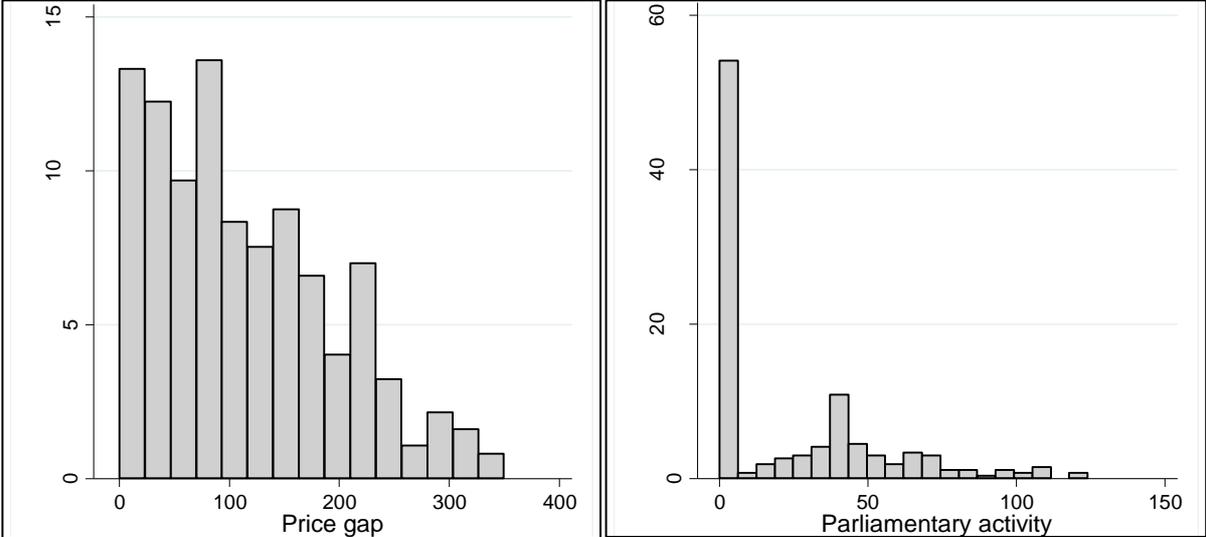
To diagnose if Seym's operations correlated with changes in the price gap, I estimate three specific linear regression equations. Equation 1 investigates the levels of values with a panel-data fixed effects model:

$$P_{i,t} = \alpha + \beta_1 S_{t-1} + \sum_2^n \beta_n C_t + \sum_{n+1}^m \beta_m D_t + \delta_t + \theta_i + \varepsilon_{i,t} \quad (1)$$

where: ' α ' is the intercept; 'i' indicates a city-pair; 't' indicates year; 'P' the silver price gap between a pair of cities 'i'; 'S' Seym's operations; 'C' control variables; 'D' period dummies; ' δ_t ' year fixed effects; ' θ_i ' city-pair fixed effects; and ' ε ' the error-term. The control variables are: (1) 'war' capturing the impact of military operations and proxied by the number of people killed in military conflicts involving Poland-Lithuania (data from Brecke 2012, see online appendix); (2) 'temperature' capturing fluctuations in harvests and proxied by the difference to the long-term mean temperature (data from Büntgen et al. 2013); (3) interest rates indicating costs of credit (data from Hoszowski 1928, 1934); (4) silver content of the currency (*grosz*) that partially accounts for the long-term changes in the value of silver and the quality of the coins (data from Hoszowski 1928, 1934); (5) and the size of grain export

from Gdańsk (data from Biernat 1962, series start in 1650 and used only as a robustness check). The variable of interest ‘S’ is either the legal capacity (Figure 2), i.e., parliamentary activity denoted as the number of days the Sejm was in session that concluded, or the regulatory activity representing the number of areas of economic activity that were regulated in Sejm’s acts (Figure 5). Because regulatory activity is a form of parliamentary activity they are never estimated in the same equation. Because the grain prices come mostly from the first quarter of the year (Adamczyk 1935), i.e., before any session would be concluded, and because parliamentary acts needed to be printed, distributed and acknowledged by the Dietines before they could be implemented, Equations 1 to 3 look at the lag of ‘S’. The time-period dummies differentiate between reigns of 13 different kings. As the parliamentary activity and the control variables are not city-pair specific, the analysis is vulnerable to common year-to-year shocks. To account for this, the standard errors in all equations are clustered around both the city-pairs and individual years. Additionally, Equation 1 will be also used to study all the city-pairs individually. The hypothesis is that β_1 is negative and statistically significant. The effects of the regulations were likely to last for more than one year and cumulate over time. This article does not tackle this empirically. For the sake of feasibility, the empirical model focuses on the aforementioned short-term mechanisms and assumes that the impact of Sejm’s actions lasted one year. Note that Figure 7 below identifies the long-term relationship.

Figure 6: Distribution of the price gap and parliamentary activity, ‘levels’ data.



Note: Excluding values above 3 standard deviations. For parliamentary activity, the range based on the concluding sessions.

Equation 1 based on levels faces three problems. First, a bi-variate regression of the price gap on its lag identifies a strong first-order autocorrelation in the price gap data (coefficient 0.56; p-value 0.00). This violates the assumption of independent error-terms needed to run a valid linear regression. Second, Figure 6 shows that both price gap and parliamentary activity data are not normally distributed (same comes for the levels of regulatory activity). This can result in misspecification of the model and heteroscedasticity. Third, the price gaps are denoted in silver that was subject to long-term changes in value due to the imports of American silver to Europe (Palma 2016). To address these problems, Equation 2 denotes the first difference (FD) specification that focuses on changes in values, ‘ Δ ’. The transformation mitigates the problem of autocorrelation, change the distribution of the variables, and shift the conceptual focus to year-to-year changes that were unlikely to be driven by long-term shifts in the purchasing power of silver (see Figures 9 and 10 below).

$$\Delta P_{i,t} = \alpha + \beta_1 \Delta S_{t-1} + \sum_2^n \beta_n \Delta C_t + \varepsilon_{i,t} \quad (2)$$

Due to data limitations, all the control variables used in Equations 1 and 2 are country specific and have the same values for all the city-pairs. To incorporate city-pair specific variance of the independent variables into the panel, as well as, limit the possibility of identifying a spurious relation, Equation 3 models the international impact of the Seym’s operations. It interacts the change in ‘S’ with ‘PL’: a dummy variable equalled one if both cities in a pair were in Poland. I will base the comparison on the control group of Munich, Augsburg, and Leipzig located in the German Lands (selection based on availability of rye prices in Allen 2001). The expectation is that Seym’s operations only affected the Polish domestic market, i.e., ‘ γ_1 ’ is statistically insignificant while ‘ γ_2 ’ is negative and significant.

$$\Delta P_{i,t} = \alpha + \gamma_1 \Delta S_{t-1} + \gamma_2 \Delta S_{t-1} * PL_i + \sum_3^n \gamma_n \Delta C_{i,t} + \varepsilon_{i,t} \quad (3)$$

The analysis faces the conceptual problem of endogeneity. As discussed, the use of the liberum veto, the main driver of the volatility of the indexes of parliamentary activity/legal capacity and regulatory activity, was related to constitutional and international issues and was not caused by changes in market conditions. However, the model in Figure 1 indicates the theoretical endogeneity from market conditions and economic growth to state capacity. The use of a lag of Seym’s operations already partially mitigates

the problem as it is unlikely that future market conditions influenced the past political decisions. However, to address the conceptual part of the problem, I instrument the measures of parliamentary and regulatory activity with an index indicating the stage of royal tenure. The index varies from 0 in the year the king was elected and progresses linearly to 1 in the year of his death. The years of death/election will be excluded from the analysis. The index of royal tenure should correlate with Seym's operations because the upcoming death of a monarch rekindled the constitutional conflict over the terms of the election that triggered the use of the liberum veto while there was no pressure to contest the political order soon after the election (see Jędruch 1998). Conversely, it is unlikely that market operations and economic growth were impacted by the age of a monarch directly. The statistical relevance of the instrument will be assessed with the use of the two-stage-least-square procedure.

Table 2: Descriptive statistics of the used data.

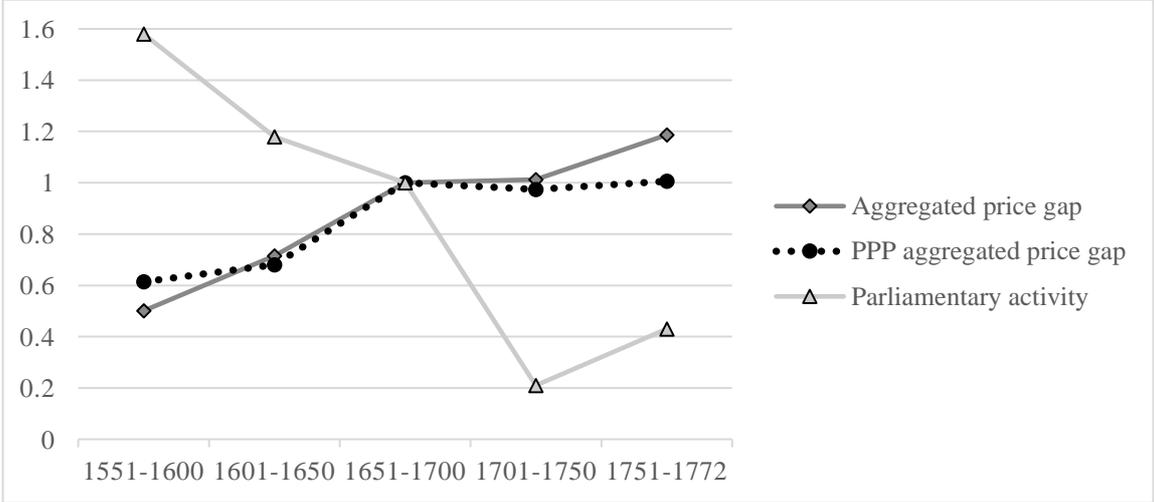
	Levels; all years			FD; all years			FD; after concluding sessions		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Price gap	790	134	124	437	114	90.5	119	99.8	74.8
Parliamentary activity (lag)	790	21	38	437	-0.99	36.7	119	25.9	49
Regulatory activity (lag)	790	1.58	2.67	437	-0.06	3.87	119	2.34	4.32
War casualties	790	2.81	4.51	437	-4.46	3.61	119	-1.02	6.1
Interest rates	790	6.23	0.47	437	0.008	0.39	119	0.04	0.41
Temperature	790	-1.07	0.9	437	-0.009	0.91	119	0.14	0.82
Silver content	790	0.3	0.28	437	-0.001	0.005	119	-0.001	0.005

EMPIRICAL ANALYSIS

Mikołaj Malinowski (2016a) analysed market integration, performance, and efficiency of Polish early modern commodity market. According to his findings, conditions on the market improved in the 16th century and worsened in the 17th and the 18th centuries. This trend follows the patterns of parliamentary activity as presented in Figure 2. Figure 7 presents the long-term correlation between the development of the average rye price gap between all the different pairs of seven cities (Figure 4, details in the online appendix) on the market and the index of parliamentary activity. Figure 7 shows that the price differences formed a new higher level during the period of anarchy. The transaction costs increased in the middle of the 17th century as a result of devastating warfare that disturbed a network of small market towns that connected the economy (Malinowski 2016a) but maintained on the higher level in the

subsequent periods of peace due to the political and institutional factors. This finding suggests a correlation between the long-term impact of Seym’s operations and market development.

Figure 7: Long-term correlation of the average rye price gap and parliamentary activity in Poland.

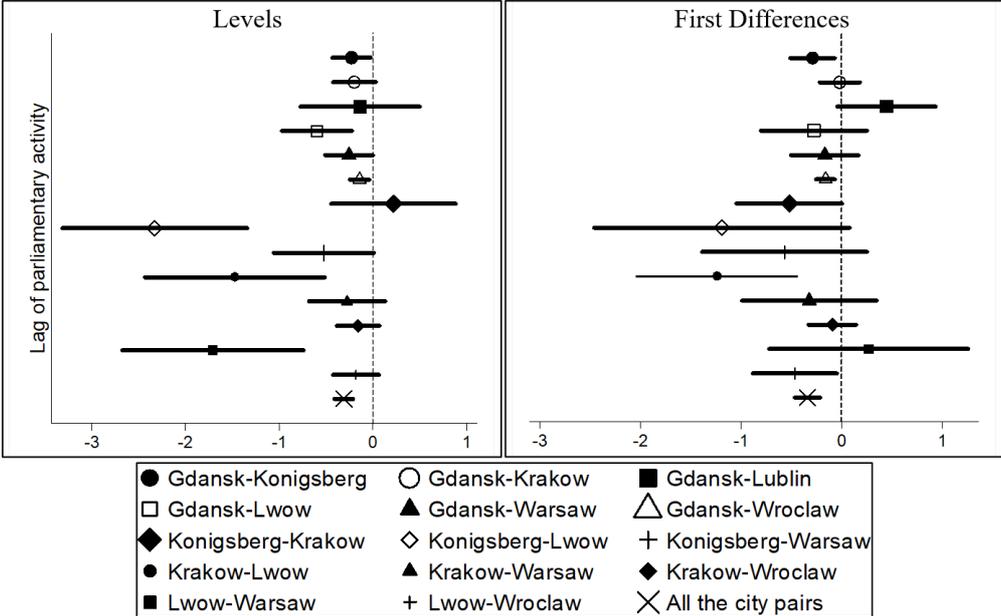


Note: Indexed values. Based on annual silver rye prices from the seven studied cities. Purchasing Power Parity (PPP) obtained by dividing the aggregated price gap by a consumer price index based on the bare-bones basket (Malinowski 2016c). See the online appendix.

Table 3 shows the results of the estimation of Equations 1 to 3 that focus on short-term effects. To limit the potential effect of outliers, the price gap and parliamentary activity data have been limited to observations below 3 standard deviations. Specification I based on Equation 1 proxies legal state capacity with a dummy variable equalled one if the Seym met. It suggests that meeting alone did not influence the transaction costs. Specification II separates between the concluded and aborted parliamentary sessions. It identifies that the expected effect occurred only if the Seym’s session ended by publishing an act. This motivates the use of the indexes of parliamentary activity, i.e., the number of days the parliament was in session that concluded, and regulatory activity, i.e., the number of areas of economic activity that were discussed in the act, to proxy ‘S’. Moreover, since every concluding Seym issued the universal and thus regulated taxes through the country, Specification II suggests that general tax regulation might have been beneficial for the operation of markets. Specification III studies the impact of parliamentary activity. It identifies that an additional day in session in the year ‘t-1’ correlated with a decline in the price gap by 0.3 grams of silver in the year ‘t’. Specification IV based on the index of regulatory activity identifies that regulating one additional area of economic activity was associated with a decline of the price gap by five grams of silver. Taken at face value, both the results indicate that

the average concluding Seym’s session of 50 days or three regulated areas would decrease the costs by approximately 15 grams of silver, or 15 per cent of one standard deviation. I am, however, not making any definitive claims about the exact size of the effect. The relation is robust to controlling for the size of grain export from Gdańsk and dropping individual cities from the analysis, including the ones located outside Polish borders (not included). This article does not investigate the specific impact of individual areas of regulatory activity that compose the index of regulatory activity but focuses on the general impact of overall regulation. This is analysed in detail in a companion paper (Malinowski 2018).

Figure 8: Standard confidence intervals of coefficients based on analysis of individual city-pair price gaps.



Note: Included only the city-pairs with at least 10 observations. ‘All pairs’ based on Specifications III and V.

Specifications V and VI based on Equation 2 analyse changes rather than levels. The specifications identify the same effect in the case of the parliamentary activity and a smaller but still statistically significant impact of the regulatory activity. Figure 8 shows the coefficients of interest obtained from estimation of variations of Equations 1 and 2 for all the city-pairs independently. It shows that the relationship between parliamentary activity/legal capacity in the previous year and the decline in the transaction costs was consistent across the city-pairs (the same applies for the regulatory activity; not included). The seemingly unrelated regression procedure indicates that these individual coefficients are jointly statistically different to zero (details of all post-estimation tests are available upon requests).

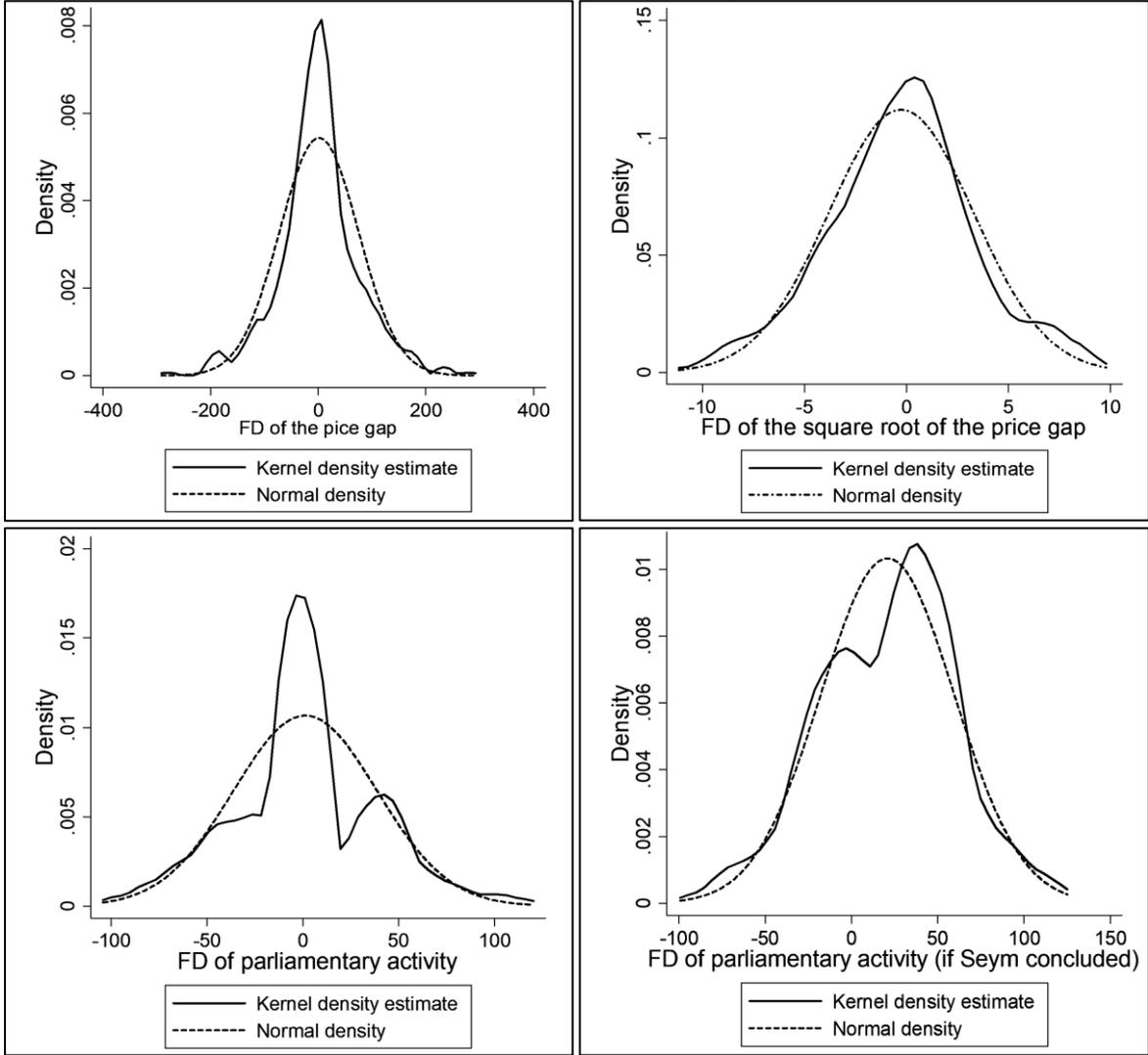
Table 3: Results of the regression analysis.

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Dependent	P_t	P_t	P_t	P_t	P_t	P_t	$\sqrt{P_t}$	$\sqrt{P_t}$	$\sqrt{P_t}$	$\sqrt{P_t}$	S_{t+1}	$\sqrt{P_t}$
Sejm meets (lag)	0.76 (0.92)											
Sejm concludes (lag)		-13.6** (0.05)										
Sejm aborts (lag)		16.96 (0.15)										
Parliamentary activity (lag)			-0.30*** (0.00)		-0.33** (0.03)		-0.015*** (0.00)	-0.025*** (0.00)	-0.05*** (0.01)			-0.005 (0.39)
Regulatory activity (lag)				-5.1*** (0.01)		-3.2* (0.08)				-0.47** (0.05)		
Parliamentary activity (lag) * PL (dummy)												-0.07*** (0.00)
$\sqrt{P_t}$											-0.006 (0.55)	
War casualties	-0.2*** (0.00)	-0.2*** (0.00)	-0.2*** (0.00)	-0.2** (0.03)	-0.2** (0.04)	0 (0.7)	0.03 (0.60)	0.08*** (0.00)	0.06 (0.32)	-0.2*** (0.01)	0.2 (0.31)	0.1* (0.04)
Temperature	3.04 (0.46)	3.99 (0.35)	3.42 (0.41)	3.44 (0.55)	5.33 (0.54)	5.15 (0.53)	-0.35 (0.41)	-0.36 (0.49)	0.56 (0.24)	0.52 (0.28)	-1.14 (0.34)	0.62 (0.44)
Interest rates	-9.68 (0.18)	-10.47 (0.16)	-15.24** (0.05)	-8.43 (0.43)	5.94 (0.71)	5.37 (0.75)	0.32 (0.61)	-0.30 (0.73)	-0.31 (0.85)	-0.9 (0.6)	-12*** (0.00)	-0.38 (0.26)
Silver content of the currency	-202** (0.05)	-187* (0.07)	-169 (0.11)	-161** (0.03)	1085 (0.44)	1167 (0.41)	-6.8 (0.28)	10.8 (0.77)	-18.2 (0.96)	-180.2 (0.73)	6.66 (0.82)	-7.66 (0.51)
Fixed Effects	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No	Yes	No
First Differences	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Clustering; city-pair and year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample	1505-1772	1505-1772	1505-1772	1505-1772	1505-1772	1505-1772	Concluding	Concluding	1717-1772	1717-1772	1505-1772	Concluding +Germany
N	790	790	790	790	437	437	248	119	185	185	780	159
R ²	0.3	0.33	0.33	0.34	0.04	0.03	0.46	0.14	n.a.	n.a.	0.23	0.05

Note: P-values based on heteroscedasticity robust standard errors in brackets. *, **, *** denote significance at the 10, 5, and 1 per cent level respectively. Specifications IX and X come from the second stage of the 2SLS procedure. 'Concluding' indicates years after concluding parliamentary sessions.

Specifications V and VI based on the first differences model are characterised by significantly lower values of R^2 . This suggest misspecification of the model that can be attributed to the skewed distribution of the price gap and parliamentary activity data (Figure 6). Regarding the latter, the disproportionately large share of changes equal zero is caused by the long periods of parliamentary inactivity in the 18th century. To remedy this problem, Specifications VII to XII investigate the square root of the price gap that, according to Shapiro-Francia test, is normally distributed. Moreover, Specifications VII, VIII, and XII analyse only the years after the sessions that concluded. This means that the results are not driven by the period-specific parliamentary inactivity. Specifications VII and VIII that are based on fixed effects and first differences methods respectively both identify that parliamentary activity/legal capacity had statistically significant impact on the size of the price gap. They also have higher R^2 measures.

Figure 9: Distributions of the key variables in Specifications V and VIII.



As the study of levels is constrained by the already-discussed serial-autocorrelation problem, I treat Specification VIII, which is based on first differences and analyses only years after the concluding sessions, as the base-line specification. As in the previous cases, the specification identifies that the average change in Seym’s activity influenced the standard deviation of the change in the square root of the price gap by approximately 15 percent.

Figure 10: Post-estimation statistics based on Specification VIII.

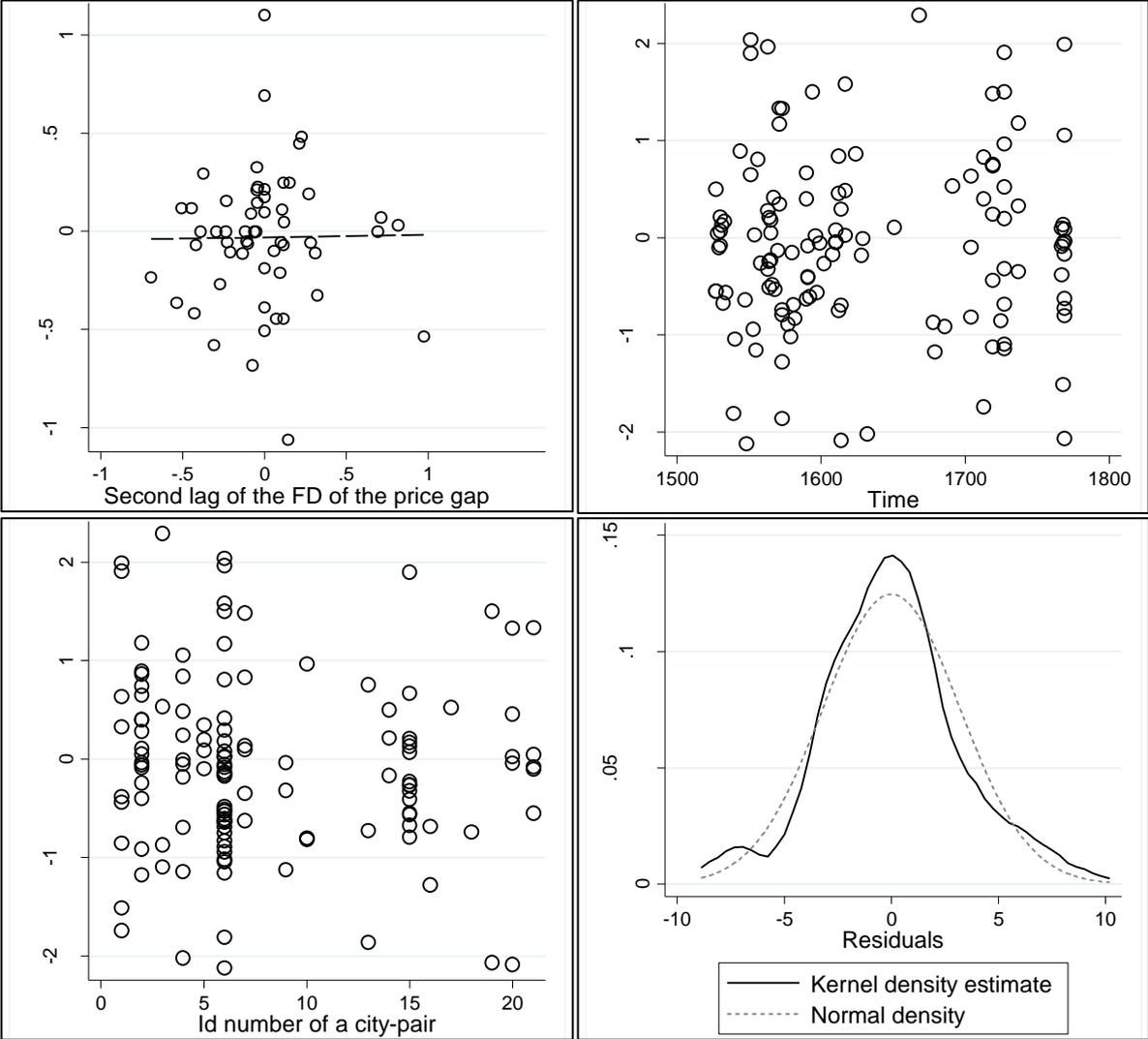


Figure 10 shows various post-estimation tests of Specification VIII that indicate whether the specification meets the assumptions required to run a linear regression. Regarding the required independence of observations, Fisher-type unit-root test identifies that the first differences of parliamentary activity and price gap are both stationary. Additionally, the Wooldridge test identifies that the observations are independent. The scatterplot of the first difference and the second lag of the first

difference, i.e., the first not overlapping, of the price gap do not show any relationship (Figure 10). Regarding the lack of multicollinearity, the Pearson's correlation coefficient for each of the pairs of independent variables does not exceed 0.2 and the variance inflation factors of all the variables are close to one. This indicates that the data does not show any symptoms of multicollinearity. Regarding normality, the kernel distribution of the residual yields that they are normally distributed and centered around zero (Figure 10). This is confirmed by the Shapiro-Francia test. Regarding homoscedasticity, the scatterplots of studentised residuals show that the variance of the residuals does not depend on time and city-pair. Studentized residuals are also close to the bandwidth of ± 2 standard deviations (Figure 10). Furthermore, as discussed, to rule out the potential effect of outliers, both the price gap and parliamentary activity data have been limited to observations within ± 3 standard deviations. Nonetheless, the panel data heteroscedasticity Wald test identifies the null hypothesis of no heteroscedasticity cannot be rejected. However, the two-way clustering procedure makes the results robust to the possible heteroscedasticity. The corresponding results for the regulatory activity also identify a statistically significant relationship (not included for brevity).

Regarding endogeneity of Seym's operations, it is intuitive to assume that the actions taken by the Seym in time 't-1' were not influenced by the future market situation. Specifications XI substantiates this claim by identifying no correlation between parliamentary activity/legal capacity in the year 't + 1' and the price gap (same for the time 't'; not included). Endogeneity may also occur due to an omitted variable or measurement error. As discussed, ' S_{t-1} ' can be potentially instrumented by the royal tenure index. Closing death of a ruler might have rekindled the constitutional conflict over the mode of succession that triggered the use of the liberum veto but should not have impacted the markets directly. Specifications IX and X make use of the two-stage-least-squares (2SLS) procedure of Equation 2 where ' ΔS_{t-1} ' is instrumented with the lagged change in the royal tenure index. They analyse the period of the most acute anarchy, i.e., the years after 1717 when the liberum veto had been already written into the Golden Liberties and the autonomy of the Dietines was constrained. In this time, there were three undisputed kings and seven concluding sessions. The Cragg-Donald Wald F statistic in the 2SLS procedure is 15, which suggests that the lag of the royal tenure score is a relevant instrument for the index of parliamentary activity (see: Stock and Yogo 2005). This is reinforced by a bi-variate regression

of one of the variables on the other that identifies a statistically significant impact with p-value of 0.017 (not included). This endogeneity-robust specification identifies the expected and statistically significant effect of legal capacity on transaction costs. Specification X also identifies the effect for the index of regulatory activity with the use of the same procedure. Notably, the under-identification test based on the Kleibergen-Paap statistics does not reject the null hypothesis of exogeneity of ' ΔS_{t-1} ' (p-value of 0.38 and 46 respectively). The potential problems of simultaneity, measurement error, or omitted variable cannot be solved within the confinements of this article and are already partially remedied by the 2SLS procedure.

Regarding the possibility of a spurious relationship between parliamentary activity and the price gaps. Specification III estimates Equation 3 and studies the international effect of Sejm's action. It looks at city-pairs in the German Lands (Munich, Leipzig, and Augsburg) with a matching sample of cities in Poland (Lublin, Lviv, and Cracow). The results show that the Polish parliament had no impact on the situation on the German commodity market and influenced only the price gaps in Poland. This result is robust to the fixed effects specification and applies also to the whole sample of data (not included).

CONCLUSION

The economic-history literature on the role of the state in long-term economic development of preindustrial Europe is divided into two opposing streams. The first argues that constraining governments helped avoid harmful predation, while the second demonstrates that strong governments often played a crucial role in setting up institutions crucial for well-operating markets. These two points of view rarely speak to one another. The case of the British Glorious Revolution led to the, sometimes contested, conventional knowledge that constraining the ruler should promote economic growth. The Polish case problematizes this by demonstrating that constraining the monarch had negative political and economic consequences. The Polish king had too few prerogatives to oppose centrifugal forces and bind the country together in the absence of a well-functioning parliament. The power vacuum was filled by regional lords that effectively divided the country into various zones of influence. *Inter alia*, the lack of control allowed them to raise tenurial rents and sharpen serfdom in the country. This demonstrates that limiting the king and forming a parliamentary regime was not a sufficient condition to initiate

sustainable economic growth. It, at least, had to be accompanied by mechanisms preventing the regional elites from hijacking the extractive power.

Initially, in the 16th century, this was ensured by a central territorial parliament representing the interest of the landed nobility. The Sejm favoured lowering of the transaction costs on the grain market to allow the nobility to export the grain cheaply. To this end, the Sejm issued numerous regulations that harmonised economic institutions and fostered market integration. However, the constitutional conflict, foreign intervention, and the interest of the richest of the nobles, magnates, to ensure their unsupervised regional influence gradually broke the Sejm and resulted in political fragmentation (possibly even re-feudalisation) that eventually led to market fragmentation.

Moreover, the findings suggest that the market economy does not form spontaneously but requires state's institutions. This article identifies a positive correlation between legal capacity of the state, regulatory activity, and commodity market integration. It makes no definitive claims regarding causality between the phenomena. However, Besley and Persson's theory, Epstein's model, the outlined specific historical mechanisms, the expected exogeneity of the past parliamentary operations and the liberum veto, and the implementation of an instrumental variable all warrant a serious consideration of a causal link between parliamentary operations and formation of a domestic commodity market. If correct, the link has important implications for our understanding of the long-term growth patterns in early modern Europe.

According to the recent GDP figures, Poland experienced economic growth in the 16th, followed by a decline in the 17th and stagnation in the 18th century (Malinowski & Van Zanden 2017). This corresponds with the identified trends in political and market development. The link suggests that the crisis of the central state institutions could be one of the causes of the economic decline of the country via its impact on the domestic market. Conversely, England and the Netherlands were the economic winners of the early modern period. According to Dincecco (2009), these economies managed to find the right balance between limitation on the executive and territorial consolidation what allowed them to reach the high levels of fiscal state capacity. The results of this article suggest that, if fiscal state capacity was complemented by the legal one, high governmental involvement in formation of domestic commodity market might have been one of the reasons of the economic rise of the North Sea Region.

Furthermore, the differences in political developments between the East and West of Europe might have contributed to the historical origins of what is known as the Little Divergence in living standards within Europe.

To prove this hypothesis, one would have to develop standardised and comparable proxies of market integration and legal state capacity. There have been few attempts to conduct cross-sectional studies of market development across early-modern Europe, but they suffer from the problem of standardisation (Federico 2012). Regarding measuring legal state capacity, Van Zanden et al. (2012) constructed the index of parliamentary activity for a range of European countries. However, because the power in the West was often exercised by both the ruler and the representative institutions, a coherent picture also requires accounts of the legal action of the rulers. Preindustrial Poland, due to the unique complementarity of its political institutions, provides a valuable insight into the relationship between states and markets, but much remains to be done to fully understand the road European states took to develop their domestic markets and how market integration impacted economic growth.

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SUPPLEMENTARY ONLINE MATERIAL: APPENDIX 1
DATA ON PARLIAMENTARIAN ACTIVITY AND WARFARE

Data on warfare casualties is based on Brecke (2012). Brecke's database reports the beginning, the ending, the number of participating adversaries, and the number of casualties in military conflicts. I divided the total number of casualties in wars fought by Poland and/or Lithuania by the duration of a conflict to measure the average annual death toll. I divided the number of casualties by the number of conflicting adversaries minus one to account for the scale of a conflict. There are gaps in the information on the number of casualties. They underrepresent only the minor conflicts and therefore do not distort the main trends.

Data on the duration of Sejm's sessions is based on Konopczyński (1948). The author reported the date of the opening and closing of each individual parliamentary session. There were three kinds of sessions: (a) regular sessions that concluded, (b) regular sessions that did not conclude, mostly due to the use of the liberum veto, and (c) sessions that were a part of the royal election procedure.

Year	Duration of Parliamentary sessions in days			War casualties	Year	Duration of Parliamentary sessions in days			War casualties
	Conclusive	Electoral	Inconclusive			Conclusive	Electoral	Inconclusive	
1493	31				1633	0	39		5440
1494	0				1634	12			5440
1495	0				1635	124			2250
1496	61				1636	0			0
1497	0				1637	0		44	2250
1498	29				1638	65			2250
1499	61				1639	0		41	0
1500	0				1640	42			0
1501	0	19		1200	1641	44			0
1502	31			1200	1642	15			0
1503	20			1200	1643	58			0
1504	51			1200	1644	0			0
1505	62			1200	1645	0		44	0
1506	5			1800	1646	42			0
1507	43			2400	1647	25			0
1508	29			2400	1648	0	58		66666
1509	36			0	1649	0	39		66666
1510	25			0	1650	45			0
1511	41			0	1651	0			13333
1512	39			0	1652	24		45	13333
1513	25			2933	1653	13			13333
1514	20			2933	1654	41		47	15110
1515	21			2933	1655	31			3271
1516	0			0	1656	0			3271
1517	41			0	1657	0			7624
1518	74			0	1658	50			3124
1519	60			1200	1659	40			3124
1520	35			1200	1660	0			3124
1521	0			0	1661	76			3124
1522	65			0	1662	71			1900
1523	108			0	1663	0			1900
1524	0			0	1664	0		35	11100
1525	59			0	1665	0		22	11100
1526	49			600	1666	0		91	11100
1527	68			1080	1667	41			1900
1528	84			1080	1668	0	50	43	400
1529	29			480	1669	0	88		0
1530	44	30		480	1670	52		21	0
1531	31			480	1671	0		48	0
1532	42			0	1672	0		42	7500
1533	25			0	1673	94			7500
1534	43			2400	1674	0	97		0
1535	30			2400	1675	0			0
1536	0			2400	1676	42			0
1537	84			2400	1677	102			0

1538	49			0	1678	16			0
1539	64			0	1679	93			0
1540	62			0	1680	0			0
1541	0			0	1681	0		131	0
1542	21			0	1682	0			0
1543	73			0	1683	43			0
1544	62			0	1684	0			0
1545	54			0	1685	105			0
1546	107			0	1686	0			0
1547	37			0	1687	0			0
1548	96			0	1688	0		82	0
1549	0			0	1689	0		90	0
1550	73			0	1690	110			0
1551	0			0	1691	0			0
1552	69			300	1692	0			0
1553	57			0	1693	0		32	0
1554	9			0	1694	0			0
1555	55			0	1695	0		72	0
1556	0			300	1696	0	29		0
1557	40			300	1697	0	57		0
1558	25			0	1698	0		12	0
1559	41			0	1699	44			0
1560	0			0	1700	0			8080
1561	0			4254	1701	0		27	8080
1562	31			4254	1702	0		35	8080
1563	124			4254	1703	38			8080
1564	148			4254	1704	0			8080
1565	87			4254	1705	0			8080
1566	106			4254	1706	0			8080
1567	75			4254	1707	0			8080
1568	0			4254	1708	0			8080
1569	214			4854	1709	0			8080
1570	74			4254	1710	0			8080
1571	0			4254	1711	0			8080
1572	76			4254	1712	71			8080
1573	0	67		0	1713	0		50	8080
1574	0	58		0	1714	0			8080
1575	0	38		600	1715	0			9913
1576	40			600	1716	0			9913
1577	0			2187	1717	0			9913
1578	54			2187	1718	41			8080
1579	38			2187	1719	0		1	8080
1580	3			2187	1720	0		51	8080
1581	46			2187	1721	0			8080
1582	0		51	2187	1722	0		41	0
1583	0			300	1723	0			0
1584	0			300	1724	41			0
1585	0		43	300	1725	0			0
1586	0			300	1726	41			0
1587	0	107		4300	1727	0			0
1588	0	19		4300	1728	0			0
1589	47			300	1729	0		5	0
1590	72			2800	1730	0		12	0
1591	14			0	1731	0			0
1592	0		42	0	1732	0		14	0
1593	41			0	1733	0	59	6	8095
1594	0			0	1734	0	14		8095
1595	45			0	1735	0		41	8095
1596	47			2000	1736	14			0
1597	0		45	2000	1737	0			0
1598	35			2000	1738	0		41	0
1599	0			2000	1739	0			0
1600	0		42	1875	1740	0		40	0
1601	36			1875	1741	0			0
1602	0			1875	1742	0			0
1603	31			1875	1743	0			0
1604	0			2955	1744	0		44	0
1605	0		33	5955	1745	0			0
1606	0		41	6017	1746	0		41	0
1607	39			6017	1747	0			0
1608	0			8017	1748	0		39	0
1609	41			8017	1749	0			0

1610	0			4955	1750	0		14	0
1611	43			4955	1751	0			0
1612	0			3080	1752	0		24	0
1613	54			1080	1753	0			0
1614	0			0	1754	0		31	0
1615	0		45	0	1755	0			0
1616	41			3000	1756	0			0
1617	0			7000	1757	0			0
1618	32			4000	1758	0		9	0
1619	53			0	1759	0			0
1620	38			1500	1760	0		7	0
1621	22			1500	1761	0		5	0
1622	0			0	1762	0		3	0
1623	44			0	1763	0			0
1624	34			0	1764	0	74		0
1625	68			1290	1765	0			0
1626	43			1290	1766	53			0
1627	42			1290	1767	86			0
1628	21			3540	1768	64			18896
1629	56			1290	1769	0			0
1630	0			90	1770	0			0
1631	46			90	1771	0			0
1632	22	76		5440	1772	0			0

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SUPPLEMENTARY ONLINE MATERIAL: APPENDIX 2
PRICE DATA

The basic unit of observation is a series of annual retail rye prices in a specific market. Rye was chosen for this study as it was the most commonly traded grain on the domestic market and the main export commodity. Furthermore, next to beer, it was the most basic source of calories for the population (Wyczański 1969). The study uses price series for Gdańsk, Königsberg, Warsaw, Cracow, Lublin, Wrocław, and Lviv. Königsberg was located in the Ducal Prussia, which was a fief of the Polish king after 1525. Wrocław was located in the historical region of Silesia, which had been a part of the domain of the Polish king back in the 11th century. At that time, it was considered one of the main capitals of the Kingdom. In 1335 it became part of the Czech domain and in 1526 it was claimed by the Habsburgs. Subsequently, in 1742 the city was assimilated by Prussia. According to Wolański (1961), in spite of the border, Wrocław remained in close economic ties with Poland. Furthermore, Warsaw was incorporated into the Polish Kingdom in 1526. Lviv had been located in the Grand Duchy of Lithuania until 1569 when it became a part of the Polish Kingdom. All the other cities were continuously located in Poland between 1500 and 1772.

Annual grain price data for Gdańsk, Cracow, Lviv, Warsaw, Cracow, Lublin and Wrocław – the latter only until 1618 – have been collected from paperback editions (Hoszowski 1928; 1934; Furtak 1935; Adamczyk 1935; 1938; Siegel 1936; Pelc 1935; 1937) and standardised to a uniform measure of a price in grams of silver for one litre by the Global Price and Income History Group. Prices for Wrocław for the 18th century were taken from David Jacks' webpage (<http://www.sfu.ca/~djacks/data/prices/Poland/index.html>). This data required standardisation. It was presented in silbergroschen per Berliner Scheffel. 1 Spesieztaler was 30 silbergroschen. In the late 17th century the taler contained 25.9839 g fine silver. From 1740 onward 1 taler was 19.4879 g fine silver. In 1750 Prussia debased the taler further to 16.7039 g and kept the level till the end of the studied period. The silver content in the period 1756-1763 is unclear and was left out from the data. One Berliner Scheffel was 62.3 litre. (Praun 1784; Ebeling & Brodhagen 1789, p. 490; Engel 1855).

Descriptive statistics of the annual rye price data				
	Years	Coverage (%)	Mean	SD
Gdańsk	1501-1772	83	0.27	0.11
Cracow	1504-1772	55	0.07	0.04
Koenigsberg	1700-1772	93	0.23	0.09
Lublin	1570-1772	20	0.33	0.18
Lviv	1519-1759	28	0.27	0.16
Warsaw	1526-1772	27	0.17	0.1
Wrocław	1509-1618 & 1696-1772	87	0.3	0.19

Note: Prices in grams of silver for one litre of rye.

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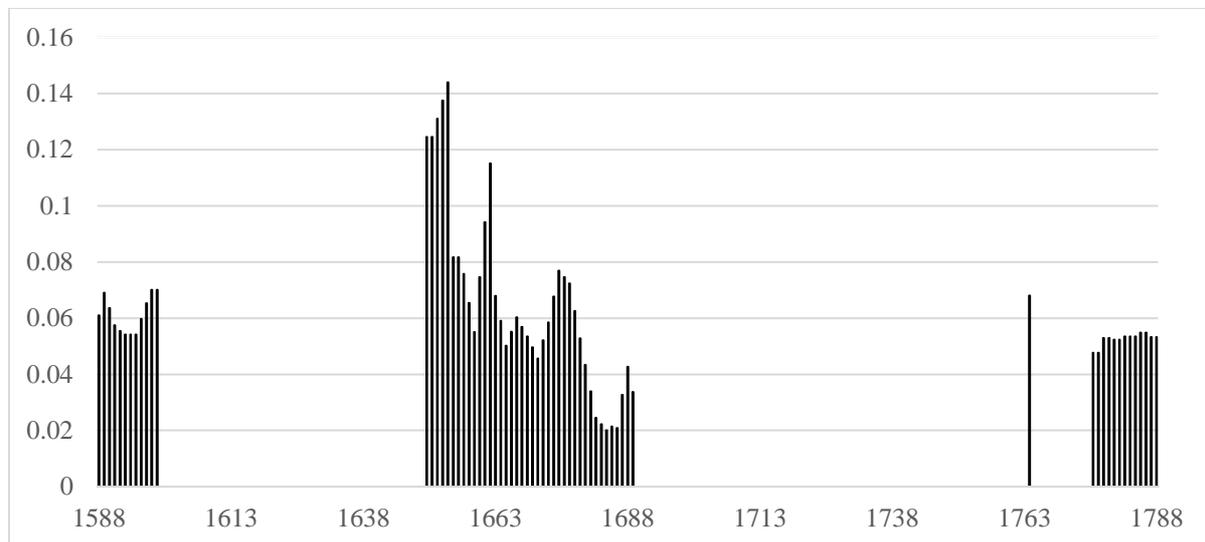
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SUPPLEMENTARY ONLINE MATERIAL: APPENDIX 3
FISCAL CAPACITY

Karaman and Pamuk (2010) have reconstructed central state revenue per capita in Poland (excluding Lithuania). Their figures do not account for many sources of royal income. This necessitates revision of the values constructed by Karaman and Pamuk.

Data on the king's traditional income from domain and taxes has been taken from: Rutkowski (1935) p. 320. Data on parliamentary income from tolls and various one-off taxes has been taken from: Filipczak-Kocur (1988) and Rybarski (1939), pp. 352-353. Data on both the incomes together has been taken from: Drozdowski (1975), pp. 108-15. Data on population has been taken from: Gieysztorowa (1981). I used lineal interpolations to fill gaps in the income series. I used this procedure only if the gap between the known observations was no wider than three years.

Central revenue of the Polish state in grams of silver per capita, 1588-1788.



Values for the revenue of the Polish state in Figure 3 in the main article were calculated as follows. The number for the 1600s is the average value for the 1590s. The observation for the 1650s is the average value for the 1660s. The spike in the revenue of the state in the early 1650s is caused by exceptional military effort. The value for the 1700s is proxied by the average value for the 1680s. This selection is motivated by data scarcity.

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SUPPLEMENTARY ONLINE MATERIAL: APPENDIX 4 THE INDEX OF REGULATORY ACTIVITY

The acts of the Sejm for the periods of interest 1505-1772 were originally compiled and published between 1732 and 1782 by the Piarists order in the form of the so-called *Volumina Legum*. This was re-published by Ohryzko between 1859 and 1889 and recently digitalised (available [here](#)). The original 18th century edition was created, after the period of anarchy discussed in the main article, to compile the laws that had been published by the Sejm since the 15th century. The original edition of the laws included an index of all the phenomena discussed in all the acts of the Sejm since its creation (volumes 10 and 11). This included economic issues. For example, for each phenomenon, for example ‘credit’ or ‘roads’, the index indicated when each law pertaining to that phenomenon was made and what exactly it stipulated.

By studying individual acts of the parliament and the index of its acts, I constructed a complete database of economic laws and regulations. These were general, i.e., pertaining to the whole country, or local, i.e., relating to a specific individual, city, or region (for example the staple rights). The database notes only the acts that were impersonal and general, except for infrastructural projects, such as bridges, that were commissioned by the Sejm. The database is in Polish and is a part of a complementary article (*Reference hidden to protect anonymity*).

For this article, the database was used to construct an index of regulatory activity. The main goal of the index is to visualise that the Sejm, when active, regulated many different aspects of economic activity throughout the country. To transform a qualitative database into a quantitative index I grouped the economic phenomena regulated in the acts into 10 different areas of economic activity. The index increases by one score for each additional area of activity regulated by at least one act. If at least one phenomenon pertaining to each of the areas of activity was regulated, the index scores 10 (as it was the case in 1611). If no regulation economic regulation was passed, the index scores 0 (as in the years when the veto was used). The index weights all the areas of economic activity equally. Additionally, it does not distinguish how many acts were issued within each area of activity. The index is intended as a first exploratory measure of long-term changes in regulatory activity of a pre-industrial economy. It is used as a complementary measure of Sejm’ activity intended for more robust regression analysis.

The 10 areas of economic activity are:

General tax

This category consists of the ‘*universal podobory*’, a general tax that regulated the size of taxation throughout the country. Each concluding Sejm published such a document.

Tolls

This category captures country-wise regulation pertaining to the size, collection, and supervision of tolls.

Transportation

This area consists of the acts that instructed construction of new infrastructural projects, setting up new trade-lines and cattle routes, instructing maintenance of roads and rivers, combating bandits, etc.

Measurements

This area groups consists of regulations pressuring standardisation of measures used in Poland-Lithuania.

Industry

This group deals with the general rules regulating operation of the industry. For example, general rights and duties of the guilds, production standards, etc.

Trade

This category groups regulation of trade. For example, prohibition of transportation of different types of goods to varying locations, exceptions from taxation for the nobility, regulation of international trade and fairs, etc.

Property rights

This category deals with property rights in agriculture and codifications of labour relations, regulations of the right to buy and sell property, inheritance, regulation of what is considered a contract etc.

Monetary policy

This area groups all the monetary reforms in the country and changes to the nominal value of the currency.

Debtors and creditors rights

For example, regulation of how the obligations ought to be divided after the death of a debtor.

Judiciary

This area grouped all the information about operation of courts, their prerogatives, modes of appointment of judges and other state representatives, etc.

